PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-297624

(43)Date of publication of application : 17.10.2003

(51)Int.Cl. H01F 1/24
C22C 38/00
C22C 38/02

(21)Application number : 2002-100230

(22)Date of filing : 02.04.2002

(71)Applicant : TOYOTA CENTRAL RES & DEV LAB INC
TOYOTA MOTOR CORP

(72)Inventor : HATTORI TAKESHI
KONDO MIKIO
TAJIMA SHIN
HIGASHIYAMA KIYOSHI
KISHIMOTO HIDESHI
SUGIYAMA MASAKI
KIKKO TADAYOSHI

(54) DUST CORE AND ITS MANUFACTURING METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a dust core composed of an Fe-Si-based magnetic powder which is higher in density than in the conventional examples.

SOLUTION: This dust core is obtained by press-molding magnetic powder coated with an insulating coating film and is composed mainly of Fe and Si. In this dust core, the Si content (X: mass%) and the density ratio (ρ/ρ0: %) that is

the ratio of the bulk density (ρ) of the dust core to the true density (ρ0) of the magnetic powder are adjusted to satisfy ρ/ρ0≥94-X(%). According to the Si content, this high-density dust core is manufactured industrially by, for example, inter-die lubricating warm press molding, etc.